

# Notice of Allowability

Application No.

10/774,910

Examiner

Frederick F. Rosenberger

Applicant(s)

SMITH, PATRICK G.

Art Unit

2884

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on 14 June 2006.
2. ☒ The allowed claim(s) is/are 1, 3-20, 22-31, and 33-46.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_.
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's reply, filed 14 June 2006, has been received and entered. Accordingly, claims 16, 22, and 28 have been amended. Claims 2 and 21 have been cancelled. Claims 32-46 have been added. Thus, claims 1, 3-20, and 22-46 are currently pending in this application.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Allison Johnson (Reg. No. 36,173) on 17 August 2006.

The application has been amended as follows:

Claim 1 (Currently Amended) A gas detector comprising:

At least one source of infrared radiation;

At least two analytical detectors, each analytical detector adapted to provide an output signal indicative of a first gas of interest, said analytical detectors being positioned to receive radiation from said source of radiation, a first of said at least two analytical detectors being positioned to receive radiation of a first predetermined

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wavelength, and a second of said at least two analytical detectors being positioned to receive radiation of said first predetermined wavelength;

At least one reference detector adapted to provide an output signal independent of the first gas of interest;

A means for summing said output signals detected by said at least two analytical detectors; and

A sample chamber for receiving a gaseous sample,

The an optical path from said source of infrared radiation to said analytical detectors passing through said sample chamber.

Claim 32 (Cancelled)

### ***Response to Arguments***

3. Applicant's amendment of claims 28 has successfully overcome the rejection of claims 28-30 under 35 U.S.C. 112, as detailed in paragraph 8 of the previous Office action.

4. Applicant's arguments, see page 10, last paragraph, filed 14 June 2006, with respect to the rejection of claim 31 under 35 U.S.C. 112 have been fully considered and are persuasive. The rejection of claim 31 has been withdrawn.

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5. Applicant's amendment of claim 22 has successfully overcome the rejection of claims 22-27 under 35 U.S.C. 102 and 35 U.S.C. 103, as detailed in paragraphs 11 and 13 of the previous Office action.

***Allowable Subject Matter***

6. Claims 1, 3-20, 22-31, and 33-46 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Independent claim 1, as amended above, provides a gas detector with a first of at least two analytical detectors positioned to receive radiation of a first predetermined wavelength and a second of at least two analytical detectors positioned to receive said first predetermined wavelength, in combination with the other claimed elements. The closest prior art, Tacke et al., only discusses positioning detectors to receive light at different wavelengths in order to provide a measure of the gross calorific value of a test gas, wherein the wavelengths are directed to different detectors via a prism. As such, there is no reasonable suggestion or motivation for providing Tacke et al. with multiple detectors positioned to receive light of a first wavelength. Accordingly, claim 1 is allowed. By virtue of dependency, claims 3-19, 45, and 46 are also allowed.

The reasons for allowance of independent claim 20 have been previously communicated in the Office action mailed 15 March 2006 (see paragraph 20). By virtue of dependency, claims 33-44 are also allowed.

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The reasons for allowance of independent claim 22 have been made of record as discussed by applicant in the reply filed on 14 June 2006, especially page 11, last paragraph. By virtue of dependency, claims 23-27 are also allowed.

Independent claim 28 provides for a method of analyzing a gaseous sample with the step of detecting radiation of a first predetermined wavelength at a first and second of the at least two analytical detectors, generating signals, and summing the signals, in combination with the other claimed steps. Tacke et al. provides a means for summing analytical detector output signals, but has different detectors responsive to different wavelengths in the mid-IR range to provide a signal indicative of the gross calorific value of the sample gas. There is no reasonable suggestion or motivation in the prior art for providing Tacke et al. with multiple detectors for detecting the same wavelength since Tacke et al. aim to measure the gross calorific content of the sample gas through absorption of the C-H bonds of the test gas in the range from 3.2 $\mu$ m to 3.6 $\mu$ m.

Accordingly, claim 28 is allowed. By virtue of dependency, claims 29-31 are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Rosenberger whose telephone number is 571-272-6107. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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